

SEQUENCE LISTING

<110> Harvell, Leslie T.
Ragghianti, James J

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<130> BB1470 US NA

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<150> 60/244,272

<151> 2000-10-30

<160> 13

<170> Microsoft Office 97

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<211> 1493

<212> DNA

<213> Zea mays

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<210> 2

<211> 371

<212> PRT

<213> Zea mays

<400> 2

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5

10

15

TIDEOT-2015100001

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20 25 30

Lys Arg Asp Gln Met Ala Pro Leu Gly Asp Gly Gly Ala Ala Ala Ala
35 40 45

Ala Ala Ser Asn Asn Leu Val Val Ser Phe Gly Glu Met Leu Ile Asp
50 55 60

Phe Val Pro Asp Val Ala Gly Leu Ser Leu Ala Glu Ser Gly Gly Phe
65 70 75 80

Val Lys Ala Pro Gly Gly Ala Pro Ala Asn Val Ala Cys Ala Ile Ala
85 90 95

Lys Leu Gly Gly Ser Ser Ala Phe Val Gly Lys Phe Gly Asp Asp Glu
100 105 110

Phe Gly His Met Leu Val Asn Ile Leu Lys Gln Asn Asn Val Asn Ser
115 120 125

Glu Gly Cys Leu Phe Asp Lys His Ala Arg Thr Ala Leu Ala Phe Val
130 135 140

Thr Leu Lys His Asp Gly Glu Arg Glu Phe Met Phe Tyr Arg Asn Pro
145 150 155 160

Ser Ala Asp Met Leu Leu Thr Glu Ala Glu Leu Asp Leu Gly Leu Val
165 170 175

Arg Arg Ala Lys Val Phe His Tyr Gly Ser Ile Ser Leu Ile Ser Glu
180 185 190

Pro Cys Arg Ser Ala His Met Ala Ala Met Arg Ala Ala Lys Ala Ala
195 200 205

Gly Val Leu Cys Ser Tyr Asp Pro Asn Val Arg Leu Pro Leu Trp Pro
210 215 220

Ser Pro Asp Ala Ala Arg Glu Gly Ile Leu Ser Ile Trp Lys Glu Ala
225 230 235 240

Asp Phe Ile Lys Val Ser Asp Asp Glu Val Ala Phe Leu Thr Arg Gly
245 250 255

Asp Ala Asn Asp Glu Lys Asn Val Leu Ser Leu Trp Phe Asp Gly Leu
260 265 270

Lys Leu Leu Val Val Thr Asp Gly Asp Lys Gly Cys Arg Tyr Phe Thr
275 280 285

Lys Asp Phe Lys Gly Ser Val Pro Gly Phe Lys Val Asp Thr Val Asp
290 295 300

Thr Thr Gly Ala Gly Asp Ala Phe Val Gly Ser Leu Leu Val Asn Val
305 310 315 320

Ala Lys Asp Asp Ser Ile Phe His Asn Glu Glu Lys Leu Arg Glu Ala
325 330 335

Leu Lys Phe Ser Asn Ala Cys Gly Ala Ile Cys Thr Thr Lys Lys Gly
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Ala Ile Pro Ala Leu Pro Thr Val Ala Thr Ala Gln Asp Leu Ile Ala
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Lys Ala Asn
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<210> 3
<211> 430
<212> DNA
<213> Zea mays

<220>
<221> unsure
<222> (293)
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tgcactgctc tcttacgacc caaacctgag ggaggcactt tggccatccc gtgaggaggc 360
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cttgagttt 430

<210> 4
<211> 101
<212> PRT
<213> Zea mays

<220>
<221> UNSURE
<222> (72)
<223> Xaa = ANY AMINO ACID

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1 5 10 15

Arg Glu Phe Met Phe Tyr Arg Asn Pro Ser Ala Asp Met Leu Leu Thr
20 25 30

Ala Asp Glu Leu Asn Val Gly Leu Ile Arg Arg Ala Ala Val Phe His
35 40 45

Tyr Gly Ser Ile Ser Leu Ile Ala Glu Pro Cys Arg Thr Ala His Leu
50 55 60

Arg Ala Met Glu Ile Ala Lys Xaa Ala Gly Ala Leu Leu Ser Tyr Asp
65 70 75 80

Pro Asn Leu Arg Glu Ala Leu Trp Pro Ser Arg Glu Glu Ala Arg Thr
85 90 95

Gln Ile Leu Ser Ile
100

<210> 5
<211> 1553
<212> DNA
<213> Oryza sativa

<400> 5
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ccattccatc tctctctctc tcgaatcttg atctctctct tcacccgctt cttgtgttcg 180
cgcgccgag cagggtgggt gttgttgtg ggggtgcaat ggccgggagg agcgagctgg 240
tggtagctt cggggagatg ctgatagact tcgtgccgac ggtggcgggg gtgtcgctgg 300
cgaggccgccc ggcgttcgtc aaggcgccag gggggccgc ggcgaacgtg gccatcgccg 360
tggcgccgct cggcgccgg gccgcgttcg tcggcaagct gggggacgac gagttcggc 420
ggatgctcgc ggcacatctc cgcgacaaacg gcgtcgacga cggcggggtc gtgttcgacg 480
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tgttctaccg caaccccagc gccgacatgc tcctcaccca cgccgagctc aacgtcgagc 600
tcatcaagag ggctggcgta ttccattatg gatcaataag ctgtatagct gagccctgcc 660
ggtcagcaca tttgcgtgcc atggagattt cgaaagaagc tggcgctg ctatcttatg 720
acccgaatct cagggaggca ttgtggccct cccgtgagga ggctcgacc aagatcttga 780
gcatctggga ccaggcagac attgtcaagg tcagcgaggt cgagctttag ttcttgaccg 840
gcattgactc agtagaggat gatgttgtca tgaagctatg gcgcctacc atgaagctcc 900
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tcccataccta caaagtacag caagttgata caacagggtc aggtgatgcttgg 1020
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aagcgattaa atttgc当地 gctgcggag caatcaccgc cacaagaaa gggcaatcc 1140
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agcattatgg tcactagctt cagctccgc aaattgtatt gtatgctgat ctggatcagg 1260
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gattaaataa tcggtccttta attgtaatgc atcattctt ttttttttt aactgaatcc 1440
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aagagtagtg tttggccaa aaaaaaaaaaaaaaaa aaaaaaaaaaaa aaa 1553

<210> 6
<211> 368
<212> PRT
<213> Oryza sativa

<400> 6
Ala Arg Ala Ser Pro Pro His Pro Lys Lys Phe Pro Thr Ile Pro Ser
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Leu Ser Leu Ser Asn Leu Asp Leu Ser Leu Ser Ser Pro Leu Val Phe
20 25 30

Ala Arg Ala Ser Arg Val Val Val Gly Gly Gly Ala Met Ala Gly
35 40 45

Arg Ser Glu Leu Val Val Ser Phe Gly Glu Met Leu Ile Asp Phe Val
50 55 60

Pro Thr Val Ala Gly Val Ser Leu Ala Glu Ala Pro Ala Phe Val Lys
65 70 75 80

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Ala	Pro	Gly	Gly	Ala	Pro	Ala	Asn	Val	Ala	Ile	Ala	Val	Ala	Arg	Leu
				85				90						95	
Gly	Gly	Gly	Ala	Ala	Phe	Val	Gly	Lys	Leu	Gly	Asp	Asp	Glu	Phe	Gly
				100				105						110	
Arg	Met	Leu	Ala	Ala	Ile	Leu	Arg	Asp	Asn	Gly	Val	Asp	Asp	Gly	Gly
				115				120						125	
Val	Val	Phe	Asp	Ala	Gly	Ala	Arg	Thr	Ala	Leu	Ala	Phe	Val	Thr	Leu
				130				135						140	
Arg	Ala	Asp	Gly	Glu	Arg	Glu	Phe	Met	Phe	Tyr	Arg	Asn	Pro	Ser	Ala
				145				150				155		160	
Asp	Met	Leu	Leu	Thr	His	Ala	Glu	Leu	Asn	Val	Glu	Leu	Ile	Lys	Arg
				165				170						175	
Ala	Ala	Val	Phe	His	Tyr	Gly	Ser	Ile	Ser	Leu	Ile	Ala	Glu	Pro	Cys
				180				185						190	
Arg	Ser	Ala	His	Leu	Arg	Ala	Met	Glu	Ile	Ala	Lys	Glu	Ala	Gly	Ala
				195				200						205	
Leu	Leu	Ser	Tyr	Asp	Pro	Asn	Leu	Arg	Glu	Ala	Leu	Trp	Pro	Ser	Arg
				210				215				220			
Glu	Glu	Ala	Arg	Thr	Lys	Ile	Leu	Ser	Ile	Trp	Asp	Gln	Ala	Asp	Ile
				225				230				235		240	
Val	Lys	Val	Ser	Glu	Val	Glu	Leu	Glu	Phe	Leu	Thr	Gly	Ile	Asp	Ser
				245				250						255	
Val	Glu	Asp	Asp	Val	Val	Met	Lys	Leu	Trp	Arg	Pro	Thr	Met	Lys	Leu
				260				265						270	
Leu	Leu	Val	Thr	Leu	Gly	Asp	Gln	Gly	Cys	Lys	Tyr	Tyr	Ala	Arg	Asp
				275				280						285	
Phe	Arg	Gly	Ala	Val	Pro	Ser	Tyr	Lys	Val	Gln	Gln	Val	Asp	Thr	Thr
				290				295				300			
Gly	Ala	Gly	Asp	Ala	Phe	Val	Gly	Ala	Leu	Leu	Arg	Arg	Ile	Val	Gln
				305				310				315		320	
Asp	Pro	Ser	Ser	Leu	Gln	Asp	Gln	Lys	Lys	Leu	Glu	Glu	Ala	Ile	Lys
				325				330						335	
Phe	Ala	Asn	Ala	Cys	Gly	Ala	Ile	Thr	Ala	Thr	Lys	Lys	Gly	Ala	Ile
				340				345						350	
Pro	Ser	Leu	Pro	Thr	Glu	Val	Glu	Val	Leu	Lys	Leu	Met	Glu	Ser	Ala
				355				360						365	

<210> 7

<211> 1310

<212> DNA

<213> Glycine max

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<400> 7

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cttcgggtgag	atgctcatcg	acttcgtccc	caccgtctct	ggcgtgtccc	tggccgaggc	180
ccctggcttc	ctcaaggccc	ccggcggcgc	ccccgctaac	gtgccatcg	ccgtgtcg	240
cctcggcggc	aaagccgcct	tcgtcggcaa	gctcggcgac	gacgagttcg	gccacatgct	300
cgccggaatc	ctcaaggaaa	acggcggtcg	cgccgacggc	atcaactttg	accagggcgc	360
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ggagaaggct	gatttgcatt	aggtcagtga	tgcggagctt	gagttcctca	caggaagtga	720
caagattgat	gatgaatctg	ctttgtcatt	gtggcacc	aatttgaagt	tgccttgc	780
cactcttggg	gaacatggtt	ccagatacta	caccaagagt	ttcaaaggat	cgttagatgc	840
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ggccaagatt	gtcgatgatc	agtccatact	tgaagatgaa	ccaaggttaa	gagaagtact	960
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tttgccaaat	aacgctttct	ttcaaatttt	gagattagcg	attgaatgaa	aatttgaatc	1260
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<210> 8

<211> 354

<212> PRT

<213> Glycine max

<400> 8

His	Glu	Arg	Thr	Ser	Leu	Ser	Cys	Arg	Ser	Lys	Thr	Val	Phe	Gln	Asn
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Pro	Asn	Thr	Leu	Ser	Leu	Pro	Met	Ala	Leu	Asn	Asn	Gly	Val	Pro	Ala
					20				25				30		

Thr	Gly	Thr	Gly	Leu	Ile	Val	Ser	Phe	Gly	Glu	Met	Leu	Ile	Asp	Phe
					35			40				45			

Val	Pro	Thr	Val	Ser	Gly	Val	Ser	Leu	Ala	Glu	Ala	Pro	Gly	Phe	Leu
					50			55				60			

Lys	Ala	Pro	Gly	Gly	Ala	Pro	Ala	Asn	Val	Ala	Ile	Ala	Val	Ser	Arg
					65			70			75		80		

Leu	Gly	Gly	Lys	Ala	Ala	Phe	Val	Gly	Lys	Leu	Gly	Asp	Asp	Glu	Phe
						85			90			95			

Gly	His	Met	Leu	Ala	Gly	Ile	Leu	Lys	Glu	Asn	Gly	Val	Arg	Ala	Asp
						100			105			110			

Gly	Ile	Asn	Phe	Asp	Gln	Gly	Ala	Arg	Thr	Ala	Leu	Ala	Phe	Val	Thr
						115			120			125			

Leu	Arg	Ala	Asp	Gly	Glu	Arg	Glu	Phe	Met	Phe	Tyr	Arg	Asn	Pro	Ser
						130			135			140			

Ala	Asp	Met	Leu	Leu	Lys	Pro	Glu	Glu	Leu	Asn	Leu	Glu	Leu	Ile	Arg
					145				150			155		160	

Ser Ala Lys Val Phe His Tyr Gly Ser Ile Ser Leu Ile Val Glu Pro
 165 170 175

 Cys Arg Ser Ala His Leu Lys Ala Met Glu Val Ala Lys Glu Ser Gly
 180 185 190

 Cys Leu Leu Ser Tyr Asp Pro Asn Leu Arg Leu Pro Leu Trp Pro Ser
 195 200 205

 Ala Glu Glu Ala Arg Lys Gln Ile Leu Ser Ile Trp Glu Lys Ala Asp
 210 215 220

 Leu Ile Lys Val Ser Asp Ala Glu Leu Glu Phe Leu Thr Gly Ser Asp
 225 230 235 240

 Lys Ile Asp Asp Glu Ser Ala Leu Ser Leu Trp His Pro Asn Leu Lys
 245 250 255

 Leu Leu Leu Val Thr Leu Gly Glu His Gly Ser Arg Tyr Tyr Thr Lys
 260 265 270

 Ser Phe Lys Gly Ser Val Asp Ala Phe His Val Asn Thr Val Asp Thr
 275 280 285

 Thr Gly Ala Gly Asp Ser Phe Val Gly Ala Leu Leu Ala Lys Ile Val
 290 295 300

 Asp Asp Gln Ser Ile Leu Glu Asp Glu Pro Arg Leu Arg Glu Val Leu
 305 310 315 320

 Lys Phe Ala Asn Ala Cys Gly Ala Ile Thr Thr Thr Gln Lys Gly Ala
 325 330 335

 Ile Pro Ala Leu Pro Lys Glu Glu Ala Ala Leu Lys Leu Ile Lys Gly
 340 345 350

 Gly Ser
 354

<210> 9
 <211> 1736
 <212> DNA
 <213> Glycine max

<400> 9
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 tacatcatag tactccaaaa actagaaaatc actgaaaagt ctttcgatta gcttccgaac 180
 cactagtgg a tggcacggcc actcctggcg ctacaaaatg tgagataact tctgagatgt 240
 tcttaactgc ttgtcaaaa ttaacaaaac ccatgaacca aaaatcatgc cttccaccg 300
 ttacaacctg aatgtacttt tctgatgggt tttccctcat ggtcaactggg ttgaccactc 360
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 ctttcacagt cagattcatc ttccccagtg cagctgaaga cactgatgga ccagttttaa 660
 ggttgtgcca gacgttgtgt gcgggtggctt cagcttttt gctccatgaa tcgaacatgt 720
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ctttttgtt	atctgggtgg	ctgcttgaa	cagcagggt	gcccatatg	tgagttcccc	900
aattctcagt	cccaacatcg	ggtggagaag	atgatgatga	tgatgctcct	tgtgcttctg	960
gaaatgattg	gttttttcg	gtgtcggtgt	tggtattcat	cttggattgt	tagtgcaaga	1020
aaaaagaggt	agaatttagaa	gcattcttct	gcaattcaaa	tcaaattttc	aaaccatggc	1080
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cttggggccc	tccggcgagg	aagcacgtca	gcaaatactc	agcatatggg	acaaggctga	1680
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<210> 10

<211> 256

<212> PRT

<213> Glycine max

<400> 10

Leu Val Phe Phe Gly Val Val Val Gly Ile His Leu Gly Leu Leu Val
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Gln Glu Lys Arg Gly Arg Ile Arg Ser Ile Leu Leu Gln Phe Lys Ser
20 25 30

Asn Phe Gln Thr Met Ala Ser Ser Thr Asn Ala Leu Pro Pro Thr Gly
35 40 45

Asn Gly Leu Ile Val Ser Phe Gly Glu Met Leu Ile Asp Phe Val Pro
50 55 60

Thr Val Ser Gly Val Ser Leu Ala Glu Ala Pro Gly Phe Leu Lys Ala
65 70 75 80

Pro Gly Gly Ala Pro Ala Asn Val Ala Ile Ala Val Ala Arg Leu Gly
85 90 95

Gly Lys Ala Ala Phe Val Gly Lys Leu Gly Asp Asp Glu Phe Gly His
100 105 110

Met Leu Ala Gly Ile Leu Lys Glu Asn Asp Val Arg Ser Asp Gly Ile
115 120 125

Asn Phe Asp Gln Gly Ala Arg Thr Ala Leu Ala Phe Val Thr Leu Arg
130 135 140

Ala Asp Gly Glu Arg Glu Phe Met Phe Tyr Arg Asn Pro Ser Ala Asp
145 150 155 160

Met Leu Leu Thr Pro Glu Asp Leu Asn Leu Glu Leu Ile Arg Ser Ala
165 170 175

Lys Val Phe His Tyr Gly Ser Ile Ser Leu Ile Val Glu Pro Cys Arg
180 185 190

Ser	Ala	His	Leu	Lys	Ala	Met	Glu	Val	Ala	Arg	Glu	Ala	Gly	Cys	Leu
195						200								205	
Leu	Ser	Tyr	Asp	Pro	Asn	Leu	Arg	Leu	Pro	Leu	Trp	Pro	Ser	Ala	Glu
210						215								220	
Glu	Ala	Arg	Gln	Gln	Ile	Leu	Ser	Ile	Trp	Asp	Lys	Ala	Asp	Val	Ile
225						230					235			240	
Lys	Val	Ser	Asp	Val	Glu	Leu	Glu	Phe	Leu	Thr	Gly	Ser	Asp	Leu	Val
					245					250				255	

<210> 11
<211> 1348
<212> DNA
<213> Triticum aestivum

<400> 11

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cgcccctggc	ctcgctgtct	ctttcggcga	gatgctgatc	gacttcgtgc	ctgacgttgc	180
cggcggttcc	ctcgccgagt	ccggcggtt	cgtcaaggcc	cccggcgccg	cccccgccaa	240
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<212> PRT
<213> Triticum aestivum

<400> 12

Met	Ala	Pro	Leu	Gly	Asp	Ala	Val	Ala	Pro	Ala	Ala	Ala	Ala	Ala	Ala	
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									20					25		30
Asp	Val	Ala	Gly	Val	Ser	Leu	Ala	Glu	Ser	Gly	Gly	Phe	Val	Lys	Ala	
									35					40		45

Pro Gly Gly Ala Pro Ala Asn Val Ala Cys Ala Ile Ser Lys Leu Gly
50 55 60

Gly Ser Ser Ala Phe Ile Gly Lys Phe Gly Asp Asp Glu Phe Gly His
65 70 75 80

Met Leu Val Glu Ile Leu Lys Gln Asn Gly Val Asn Ala Glu Gly Cys
85 90 95

Leu Phe Asp Gln His Ala Arg Thr Ala Leu Ala Phe Val Thr Leu Lys
100 105 110

Ser Asn Gly Glu Arg Glu Phe Met Phe Tyr Arg Asn Pro Ser Ala Asp
115 120 125

Met Leu Leu Thr Glu Ala Glu Leu Asn Leu Asp Leu Ile Arg Arg Ala
130 135 140

Arg Ile Phe His Tyr Gly Ser Ile Ser Leu Ile Thr Glu Pro Cys Arg
145 150 155 160

Ser Ala His Val Ala Ala Thr Arg Ala Ala Lys Ser Ala Gly Ile Leu
165 170 175

Cys Ser Tyr Asp Pro Asn Val Arg Leu Pro Leu Trp Pro Ser Ala Gln
180 185 190

Ala Ala Arg Asp Gly Ile Met Ser Ile Trp Lys Glu Ala Asp Phe Ile
195 200 205

Lys Val Ser Asp Glu Glu Val Ala Phe Leu Thr Gln Gly Asp Ala Thr
210 215 220

Asp Glu Lys Asn Val Leu Ser Leu Trp Phe Glu Gly Leu Lys Leu Leu
225 230 235 240

Ile Val Thr Asp Gly Glu Lys Gly Cys Arg Tyr Phe Thr Lys Asp Phe
245 250 255

Lys Gly Ser Val Pro Gly Tyr Ser Val Asn Thr Val Asp Thr Thr Gly
260 265 270

Ala Gly Asp Ala Phe Val Gly Ser Leu Leu Val Ser Val Ser Lys Asp
275 280 285

Asp Ser Ile Phe Tyr Asn Glu Ala Lys Leu Arg Glu Val Leu Gln Phe
290 295 300

Ser Asn Ala Cys Gly Ala Ile Cys Thr Thr Lys Lys Gly Ala Ile Pro
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Ala Leu Pro Thr Thr Ala Thr Ala Leu Glu Leu Ile Ser Lys Gly Ser
325 330 335

Asn
337

<210> 13
<211> 328

<212> PRT

<213> Lycopersicon esculentum

<400> 13

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Glu Met Leu Ile Asp Phe Val Pro Thr Val Ser Gly Val Ser Leu Ala
20 25 30

Glu Ala Pro Gly Phe Leu Lys Ala Pro Gly Gly Ala Pro Ala Asn Val
35 40 45

Ala Ile Ala Val Thr Arg Leu Gly Gly Lys Ser Ala Phe Val Gly Lys
50 55 60

Leu Gly Asp Asp Glu Phe Gly His Met Leu Ala Gly Ile Leu Lys Thr
65 70 75 80

Asn Gly Val Gln Ala Glu Gly Ile Asn Phe Asp Lys Gly Ala Arg Thr
85 90 95

Ala Leu Ala Phe Val Thr Leu Arg Ala Asp Gly Glu Arg Glu Phe Met
100 105 110

Phe Tyr Arg Asn Pro Ser Ala Asp Met Leu Leu Thr Pro Ala Glu Leu
115 120 125

Asn Leu Asp Leu Ile Arg Ser Ala Lys Val Phe His Tyr Gly Ser Ile
130 135 140

Ser Leu Ile Val Glu Pro Cys Arg Ala Ala His Met Lys Ala Met Glu
145 150 155 160

Val Ala Lys Glu Ala Gly Ala Leu Leu Ser Tyr Asp Pro Asn Leu Arg
165 170 175

Leu Pro Leu Trp Pro Ser Ala Glu Glu Ala Lys Lys Gln Ile Lys Ser
180 185 190

Ile Trp Asp Ser Ala Asp Val Ile Lys Val Ser Asp Val Glu Leu Glu
195 200 205

Phe Leu Thr Gly Ser Asn Lys Ile Asp Asp Glu Ser Ala Met Ser Leu
210 215 220

Trp His Pro Asn Leu Lys Leu Leu Leu Val Thr Leu Gly Glu Lys Gly
225 230 235 240

Cys Asn Tyr Tyr Thr Lys Lys Phe His Gly Thr Val Gly Gly Phe His
245 250 255

Val Lys Thr Val Asp Thr Thr Gly Ala Gly Asp Ser Phe Val Gly Ala
260 265 270

Leu Leu Thr Lys Ile Val Asp Asp Gln Thr Ile Leu Glu Asp Glu Ala
275 280 285

Arg Leu Lys Glu Val Leu Arg Phe Ser Cys Ala Cys Gly Ala Ile Thr
290 295 300

Thr Thr Lys Lys Gly Ala Ile Pro Ala Leu Pro Thr Ala Ser Glu Ala
305 310 315 320

Leu Thr Leu Leu Lys Gly Gly Ala
325